HISTORIC PROPERTY INVENTORY FORM

IDENTIFICATION SECTION

Field Site No. 216-B-5 Reverse Well **OAHP No.** _____ **Date Recorded** 4-Apr-99
Site Name Historic
Common
Field Recorder Jim Sharpe
Owner's Name U.S. Department of Energy, Richland Operations Office
Address P.O. Box 550
City/State/Zip Code Richland, WA 99352

State of Washington, Department of Community Development
Office of Archaeology and Historic Preservation
111 21st Avenue Southwest, Post Office Box 48343
Olympia, Washington 98504-8343 (206)753-4011

LOCATION SECTION

Address well, 200
City/Town/County/Zip Code Richland/Benton County/99352
Twp 12 N **Range** 26 E **Section** 3 **1/4 Section** NE **1/4 1/4 Sec** SE
Tax No./Parcel No. Gable Butte, Wash. 1986 **Acreage**
Quadrangle or map name
UTM References Zone 11 **Easting** 305620 **Northing** 5159120
Plat/Block/Lot
Supplemental Map(s)

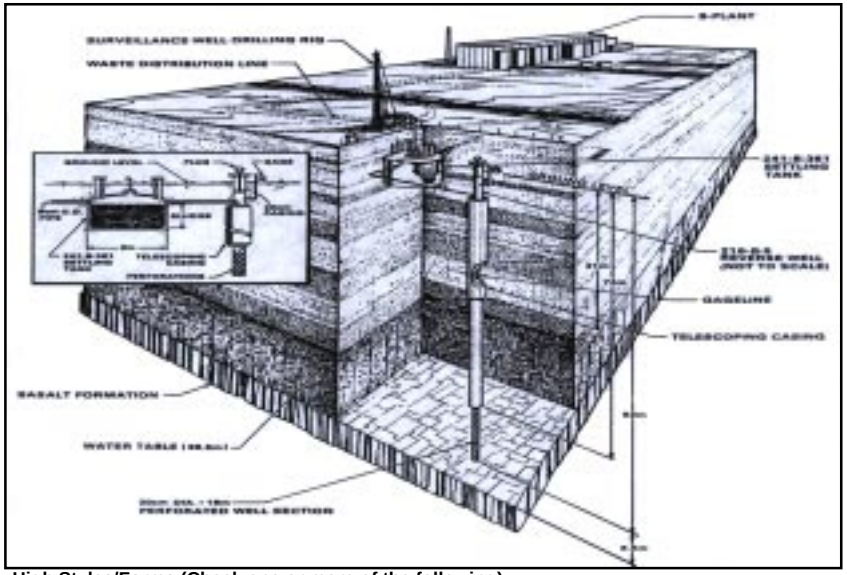
Status

- [x] Survey/Inventory
- [ ] National Register
- [ ] State Register
- [ ] Determined Eligible
- [ ] Determined Not Eligible
- [ ] Other (HABS, HAER, NHL)
- [ ] Local Designation

Photography
Photography Neg. No. RHO-ST-37
(Roll No. & Frame No.)
View of
Date

Classification	[ ] District	[ ] Site	[ ] Building	[x] Structure	[ ] Object
District Status	[x] NR	[ ] SR	[ ] LR	[ ] INV	
Contributing	[x]	**Non-Contributing**	[ ]		

District/Thematic Nomination Name Hanford Site Manhattan Project and Cold War Historic District



Description Section
Materials & Features/Structural Types
Building Type Industry
Plan
Structural System
No. of Stories

Roof Type

- [ ] Gable
- [ ] Hip
- [ ] Flat
- [ ] Pyramidal
- [ ] Monitor
- [x] Other (specify) none (well)
- [ ] Gambrel
- [ ] Shed

Cladding (exterior Wall Surfaces

- [ ] Log
- [ ] Horizontal Wood Siding
  - Rustic/Drop [ ]
  - Clapboard [ ]
- [ ] Wood Shingle
- [ ] Board and Batten
- [ ] Vertical Board
- [ ] Asbestos/Asphalt
- [ ] Brick
- [ ] Stone
- [ ] Stucco
- [ ] Terra Cotta
- [ ] Concrete/Concrete Block
- [ ] Vinyl/Aluminum Siding
- [ ] Metal (specify)
- [ ] Other (specify)

Roof Material

- [ ] Wood Shingle
- [ ] Wood Shake
- [ ] Composition
- [ ] Slate
- [ ] Tar/Built-up
- [ ] Tile
- [ ] Metal (specify)
- [x] Other (specify) none (well)
- [ ] Not visible

Foundation

- [ ] Log
- [ ] Post & Pier
- [ ] Stone
- [ ] Brick
- [ ] Not visible
- Concrete
  - [ ] Block
  - [ ] Poured
  - [x] Other (specify) well casing

High Styles/Forms (Check one or more of the following)

- [ ] Greek Revival
- [ ] Gothic Revival
- [ ] Italianate
- [ ] Second Empire
- [ ] Romanesque Revival
- [ ] Stick Style
- [ ] Queen Anne
- [ ] Shingle Style
- [ ] Colonial Revival
- [ ] Beaux Arts/Neoclassical
- [ ] Chicago/Commercial Style
- [ ] American Foursquare
- [ ] Mission Revival
- [ ] Spanish Colonial Revival/Mediterranean
- [ ] Tudor Revival
- [ ] Craftsman/Arts & Crafts
- [ ] Bungalow
- [ ] Prairie Style
- [ ] Art Deco/Art Moderne
- [ ] Rustic Style
- [ ] International Style
- [ ] Northwest Style
- [ ] Commercial Vernacular
- [ ] Residential Vernacular (see below)
- [ ] Other (specify)

Vernacular House Types

- [ ] Gable Front
- [ ] Gable Front and Wing
- [ ] Side Gable
- [ ] Cross Gable
- [ ] Pyramidal/Hipped
- [ ] Other (specify)

(Include detailed description in **Description of Physical Appearance)**

Integrity

	Intact	Slight	Moderate	Extensive
Changes to plan	[ ]	[ ]	[ ]	[ ]
Changes to windows	[ ]	[ ]	[ ]	[ ]
Changes to original cladding	[ ]	[ ]	[ ]	[ ]
Changes to interior	[ ]	[ ]	[ ]	[ ]
Other (specify)	[ ]	[ ]	[ ]	[ ]

NARRATIVE SECTION

Study Unit Themes (check one or more of the following)

	Agriculture		Conservation		Politics/Government/Law
	Architecture/Landscape Architecture		Education		Religion
	Arts		Entertainment/Recreation		Science & Engineering
	Commerce		Ethnic Heritage (specify) _____		Social Movements/Organizations
	Communications		Health/Medicine		Transportation
	Community Planning/Development		Manufacturing/Industry	x	Other (specify) Manhattan Project & Cold War Era
			Military	x	**Study Unit Sub-Theme(s)** Waste Management (Liquid)

Statement of Significance

Date of Construction 1944 Architect/Engineer/Builder _____

x In the opinion of the surveyor, this property appears to meet the criteria of the National Register of Historic Places.

x In the opinion of the surveyor, this property is located in a potential historic district (National and/or local).

The 216-B-5 Reverse Well was located in the 200 East Area of the Hanford Site. It was about 370 meters northeast of the 221-B Building. The well was completed in 1944 to a depth of 92 meters and was designed to provide a system for distributing liquid waste solutions into the surrounding sediments. The well operated from April 1, 1945 to September 20, 1947. The well received low salt, alkaline, and radioactive liquid wastes from cell washings from the 221-B and 224-B Buildings via the 241-B-361 settling tank. Wastes were initially discharged to the settling tank and overflowed to the reverse well. It was removed from service when it was discovered that alpha contamination had reached ground water. Liquid waste entered the well at about 3.7 meters below ground surface. The well received waste from a settling tank that removed particulate material prior to being discharged into the reverse well reducing the chance of plugging the system. The system was designed to operate when liquid levels in the reverse well reached the lower end of the pipe indicating that the well was filling with liquid waste.

It is the conclusion of the U.S. Department of Energy that the B-5 Reverse Well, through its initial role in liquid waste management, is eligible for inclusion in the National Register of Historic Places under Criterion A as a contributing property within the Hanford Site Manhattan Project and Cold War Era Historic District.

Description of Physical Appearance

The 216-B-5 Reverse Well was drilled using a telescoping casing technique with 40 cm casing to 4 m, 30 cm casing to 31 m, 25 cm casing to 74 m, and 20 cm casing to 92 m. The design called for a 20cm casing to be perforated from 74 meters to the bottom of the well to allow waste solutions to be distributed into subsurface sediments. From the ground surface a 1.3 cm diameter pipe extended to within 15 meters from the bottom of the well to allow measurements of liquid levels.

Major Bibliographic References

Rockwell Hanford Operations. 1980. *216-B-5 Reverse Well Characterization Study.* RHO-ST-37. Richland, Washington.